

JUN 4 1979

MEMORANDUM FOR DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET

SUBJECT: Further Convergence of Polar Meteorological Satellite Programs

(U) In response to your memorandum of 1 February 1979, the Polar-Orbiting Operational Meteorological Satellite Coordinating Board (POOMSCB) has forwarded to you their draft report on further convergence. This report examines several alternatives and concludes that further convergence is functionally feasible. Your memorandum raised other issues concerning organizational responsibilities, timing, and cost effective utilization of the Shuttle. I would like to make clear my position on these subjects.

(U) I believe that further convergence offers potential savings in the overall federal budget. Our ability to capture this potential without unduly compromising operational missions depends, however, upon the effectiveness of the converged program and management structure. Because of the importance of the Defense Meteorological Support Program (DMSP) to national security missions, I have concluded that further convergence is viable only by augmentation of the DMSP to support civil needs, while retaining DoD management. Such a converged system and the operational factors which dictate this approach are described in the enclosed Defense Position Paper (Enclosure 1).

(U) Should further convergence be directed, I will be fully committed to assuring that DMSP truly serves the civil, as well as military users. You will note that the position paper retains significant responsibility for the program within Defense. This is based upon several factors which I believe must be maintained in any convergence scheme.

(U) First, a single agency line management organization is essential to execution of a dynamic and cost effective program. Secondly, the program must have a stable funding profile and should avoid multiple agency budgeting systems, justification processes and appropriations. If necessary, I am willing to have all program funds included in the Defense line. Finally, a continuous operational capability must be maintained. I request a decision on convergence of the operational polar meteorological systems no later than 16 July, in time for my budget activities in August. Decisions on other convergence issues can be made on the basis of the meteorological convergence outcome.

On file OSD release instructions apply.

(U) Concerning Shuttle utilization, the Defense goal is to use the Shuttle to achieve our missions at the lowest practical cost. As you know, we have studies ongoing which are examining many alternatives for Shuttle usage, including the potential for retrieval and refurbishment, for a range of operational and experimental missions. We are seeking the most cost-effective engineering approach for convergence and I do not believe that the engineering options are convergence issues. Here again, an early decision on convergence will help assure that all critical needs are included in these studies.

*Harold Brown*

Enclosure

cc: Secretary of Commerce  
President's National Security Advisor  
Director, Office of Science and Technology Policy  
Chairman, Joint Chiefs of Staff  
Administrator, NASA

on  
Further Convergence of DoD and Civil Polar Orbiting  
Meteorological Satellite Systems

DoD supports the further convergence of military and civil polar orbiting satellite systems, if satisfaction of the operational military requirements detailed below is maintained.

Certain high priority DoD missions require responsive, high quality meteorological support. In order to retain adequate support such as DoD has received from the Defense Meteorological Satellite Program (DMSP) and to ensure that future support will be equal to the military needs, DoD must retain a significant level of control over the development, management, operation, and command and control of any future polar orbiting meteorological satellite program which would supercede DMSP.

DoD has participated closely with the National Weather Service and has made full use of civil products and services where applicable. However, neither military nor civil meteorological sources, including the civil TIROS satellite system, were able to provide all the needed information. A military satellite program (currently designated DMSP) was created to fulfill critical shortfalls in:

- Global imagery coverage with high precision
- Assured daily coverage
- Precise time of collection
- Data through-put for immediate operational use
- Security and survivability

The system was successful and DMSP has been fully integrated into the US force structure.

- Military weather reconnaissance aircraft have been cut back.
- Most theater commands and aircraft carriers have or are programmed for direct readout terminals and a contingency tactical terminal is on alert.
- The end-to-end system, including personnel, procedures and logistics, has been tailored for assured, responsive support in dynamic military and national strategic situations.
- Weather support to world-wide operations have been restructured with much greater reliance upon the Air Force Global Weather Central and Navy Fleet Numerical Weather Center, which in turn rely heavily upon DMSP.

The integration of DMSP into the Defense force structure results in vital functions which must be accommodated in any follow-on meteorological satellite program. From end-to-end, the system has to be carefully structured to simultaneously support diverse national and in-theater customers, with training and logistics compatible with enlisted personnel skill levels, and with tasking and operations geared for assured support of daily missions of the highest priority.

DMSP was created only with intensive iterations of meteorological, engineering and user needs to achieve a responsive system within the constraints of practical system design. This System Engineering infrastructure is essential to continued operational military support and cannot be farmed out to another agency. Most of the functions of the DMSP Program Office and the cadre of participants will have to be maintained in any further convergence. Specifications cannot be provided to a civil agency any more easily than to a contractor and the constant interaction with users during the development, acquisition and operational phases will still be required. In this regard, the insertion of a civil agency into these essential functions as merely a middleman complicates rather than streamlines the process. Thus, if a joint program is desired, implementation should be by civil augmentation of the DMSP Program Office.

A single joint program would logically be based upon the DoD system. Most domestic requirements are satisfied by the separate civil geosynchronous satellite system (GOES), augmented by the civil low-altitude polar satellite system filling in for specific operational needs. By contrast, key Defense needs demand a low-altitude polar system and result in such technical requirements such as pointing accuracy, global coverage, local readout, assured availability and accommodation of special missions which will dominate the development of a further converged system. A system capable of satisfying Defense requirements will lend itself well to the typically less demanding civil needs not satisfied by the geosynchronous system.

For each functional area of the satellite system, vital Defense needs and corresponding organizational responsibilities for further convergence are discussed below:

- Requirements can be developed jointly with civil agencies.
- System Engineering and Development must be the responsibility of DoD. The DMSP Program Office can be augmented with civil representatives, including management positions.
- Development and acquisition of spacecraft and sensors required for the primary military mission must be controlled by DoD. A "core" spacecraft design can be developed which will accept various mixes of military, civil and joint payloads. The civil community can share common hardware or they can procure additional items by (1) adding to Defense contracts, (2) through separate procurement using Program Office specifications, or (3) their own unique developments.

- Military sensors can be expanded to satisfy some civil needs and vice versa. Responsibility for sensor development would be assigned based upon major requirements or interest, with minimal duplication. Civil payloads can be carried on militarily required spacecraft and vice versa.
- Funding for the converged system will be by a single program line, carried in the Defense budget, with joint justification of the program.
- DoD must maintain selection of launch dates and times, precise orbit parameters, daily coverage, command and control and payload management for at least two satellites continuously on-orbit.
- Launch will be via the standard Space Transportation System division of responsibility.
- Needed security, including COMSEC, will be provided for the two militarily required satellites. Direct readout of selected data to foreign civil sites in support of international agreements can be included subject to interruption in case of compromise of national security in crisis or conflict.
- Survivability is required commensurate with military use in crisis and conflict. All satellites will be configured to deny data to the enemy in time of national emergency.
- Operational priorities, including for contingency conditions, will be established jointly for guidance of day-to-day tasking of the system.
- Shared operating structure, subject to maintaining an essential wartime capability, can be implemented with integrated military and civil tasking and participation in spacecraft command and control.
- Free interchange of most planning and tasking information and data products will continue both ways across the military/civil interface.
- Shared processing with complementary responsibilities can be implemented with individual distribution.
- Cooperative R&D will continue with civil agencies responsible for basic research and performing those efforts they are willing to perform and fund, and DoD conducting only those projects where there is a significant military application.

This degree of convergence would result in extensive common hardware, facilities and procedures, assure the absence of unnecessary duplication, maintain a sound programmatic and budgeting structure for implementing the program, and retain certain existing management structure elements to satisfy the requirements of law, policy and international implications to which both DoD and the civil community must adhere.